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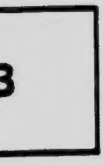

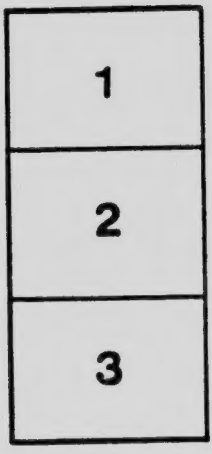

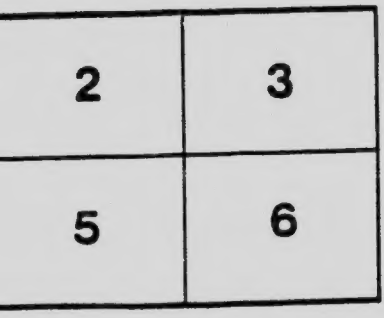

REPORT

OF THE

CANADIAN ARCTIC EXPEDITION 1913-18

VOLUME VIII: MOLLUSKS, ECHINODERMS, COELENTERATES, ETC.

PART I: HYDROIDS

By C. McLEAN FRASER

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OTTAWA
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1922

Issued August 14, 1922

Report of the Canadian Arctic Expedition, 1913-18.

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REPORT

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CANADIAN ARCTIC EXPEDITION 1913-18

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PART I: HYDROIDS

By C. McLEAN FRASER

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Hydroids of the Canadian Arctic Expedition, 1913-18.

By C. McLean Fraser

The number of hydroids collected by the Canadian Arctic Expedition was not large, but along with this collection Mr. Frits Johansen sent some that he collected in Hudson Bay in August, 1920, and some collected at other times, that were found in the Victoria Memorial Museum, Ottawa.

Taken altogether, the collection, although not large, is quite interesting, and as it is all from the north and arctic regions, it is considered in the one report. The largest portion came from Richmond gulf, east coast of Hudson bay, where 17 out of a total of 25 marine species were obtained.

The species represented give support to the distribution theory advanced on previous occasions, *i.e.* that most of the hydroids of the north temperate seas, in all the families, with the exception of the Plumularidæ, which, in any case, is not well represented, have had their origin in some Arctic centre from which there has been a circumpolar distribution and from this distribution, southward along each coast of each continent.

No new species has appeared in the collection. Of the 25 marine species obtained, *Abietinaria greenei* was found only in the Bering sea near the Aleutian islands. Previously, it had not been reported farther north than Vancouver island. Of the remaining 24, only one species had hitherto been found in the Pacific, and not to the eastward. This was *Hydractinia lævispina*, obtained from Gabriola pass (20 miles from the Biological Station, Nanaimo, B.C.) in 1921, and just described as a new species. If time of collecting were considered, Bernard harbour would be the original locality.

The only species reported farther east and not in the Pacific are *Gonothyræa loveni*, *Hæcium beani* and *Selaginopsis alternitheca*. The first two are common species on the eastern Canadian coasts, as well as in European waters, and they have not appeared so very far afield since the former was collected in Hudson strait and the latter in Hudson bay. *Selaginopsis alternitheca* was first reported from Davis strait. The only other appearance until now was in some material collected near Cheticamp, Cape Breton, in 1917.

A table will show the comparative distribution. The Arctic refers largely to the European Arctic, although it includes the Greenland area as well.

Besides the marine material, some specimens of *Hydra* were collected by Mr. Johansen, but they were not in good enough condition for classification. Some of them were obtained in a creek at Bernard harbour, Dolphin and Union strait, August 6, 1915. Johansen's record is as follows: "Attached to the underside of stones in the streaming water were many (fully outstretched ca. 15 mm. long) *Hydra* species of the following colour: suctorial disc at hind end, pale rosa; this colour getting first paler but afterwards increasing in intensity forwards; front end, strongly rosa; the 8 tentacles pale."

Some other specimens were obtained at Konganevik, Alaskan coast, but they were not kept, and the particulars are meagre. His note is as follows: "June 25, 1914. Konganevik (Camden bay), Alaskan arctic coast. In a tundra

	Pacific	Atlantic	Europe	Arctic
Syncoryne eximia	x		x	x
Eudendrium tenellum	x	x	x	x
Hydractinia lævispina	x			
Campanularia volubilis	x	x	x	x
Gonothyræa loveni		x	x	x
Obelia plicata	x		x	
Calycella syringa	x	x	x	x
Cuspidella grandis	x	x	x	x
Opercularella lacerata	x	x	x	x
Halecium beani		x	x	x
Halecium labrosum	x	x	x	
Halecium muricatum	x	x	x	x
Halecium tenellum	x	x	x	x
Filellum serpens	x	x	x	x
Lafœa dumosa	x	x	x	x
Lafœa fruticosa	x	x	x	x
Lafœa gracillima	x	x	x	x
Abietinaria greenei	x			
Abietinaria turgida	x			x
Diphasia pulchra	x	x		x
Selaginopsis alternithecа		x		x
Sertularella fusiformis	x	x	x	
Sertularella polyzonias	x	x	x	x
Sertularella tricuspidata	x	x	x	x
Thuiaria similis	x	x		

pond I found attached to water plants, minute, 1 cm. long (fully outstretched, including the five arms), bright red *Hydra* species forming their typical known spores on the side of the 'stalk.' I tried to keep them alive, but they died and rotted later. The temperature of the margin of the pond was 54° F. (2 p.m.)."

Species and Distribution

Family **SYNCORYNIDAE**

Syncoryne eximia Allman.—Richmond gulf, 15-29 fathoms.

Family **EUDENDRIDAE**

Eudendrium tenellum Allman.—Richmond gulf, 15-20 fathoms.

Family **HYDRACTINIDAE**

Hydractinia lævispina Fraser.—Station 41, Bernard harbour, N.W.T., 3-5 fathoms, July 20, 1915.

Family **CAMPANULARIDAE**

Campanularia volubilis (Linn.)—Richmond gulf, 15-20 fathoms.
Gonothyræa loveni (Allman).—Richmond gulf, 15-20 fathoms.
Obelia plicata, Hincks.—Small island between Long island and Cape Jones, east coast of Hudson bay. Beach water.

Family **CAMPANULINIDAE**

Calycella syringa (Linn.)—Port Burwell, Ungava. "Neptune" Expedition, 1903-04; between Black Whale and Olaska harbours, east coast of Hudson bay, 10 fathoms; Richmond gulf, 15-20 fathoms.

Cuspidella grandis Hincks.—Richmond gulf, 15-20 fathoms; Station 43*b*, Dolphin and Union strait, N.W.T., 50-60 metres, September 14, 1915.

Opercularella lacerata (Johnston).—Richmond gulf, 15-20 fathoms.

Family **HALECIDAE**

Halecium beani (Johnston).—King George's sound, south side of Hudson strait, 40 fathoms, "Diana" Expedition, September, 1897.

Halecium labrosum, Alder.—Richmond gulf, 15-20 fathoms.

Halecium muricatum (Ellis and Solander).—Richmond gulf, 15-20 fathoms.

Halecium tenellum, Hincks.—King George sound, south side of Hudson strait, 40 fathoms; Port Burwell, Ungava; Richmond gulf, 15-20 fathoms.

Family **LAFOEIDAE**

Filellum serpens (Hassell).—Richmond gulf, 15-20 fathoms.

Lafœa dumosa (Fleming).—Richmond gulf, 15-20 fathoms.

Lafœa fruticosa Sars.—Richmond gulf, 15-20 fathoms.

Lafœa gracillima (Alder).—Richmond gulf, 15-20 fathoms.

Family **SERTULARIDAE**

Abietinaria greenei (Murray).—Station 14, Bering sea, near Unimak, Alaska, July 2, 1913. Surface.

Abietinaria turgida (Clark).—Between Blackwhale and Olaska harbours, east coast of Hudson bay, 10 fathoms; Richmond gulf, 15-20 fathoms; Station 19 *a-e*, off Norton sound, Alaska, July 8, 1913, surface; Station 14, Bering sea, near Unimak island, Alaska.

Diphasia pulchra Nutting.—Bay on east side of Grey Goose island (lat. 54° N.), east side of James bay, 10 fathoms.

Selaginopsis alternitheca (Levinsen).—Station 27*s*, Collinson point, Alaska, 3 fathoms, October 3, 1913.

Sertularella fusiformis (Hincks).—King George sound, south side of Hudson strait, 40 fathoms.

Sertularella polyzonias (Linn.).—King George sound, south side of Hudson strait, 40 fathoms; Richmond gulf, 15-20 fathoms.

Sertularella tricuspidata (Alder).—Station 22, near Icy cape, Alaska, 11-12 fathoms, August 17, 1913, Richmond gulf, 15-20 fathoms.

Thuiaria similis (Clark).—Station 22, near Icy cape, Alaska, 11-12 fathoms; Richmond gulf; 15-20 fathoms.

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Note:—For synonymy and bibliography see previous papers, especially,

The Hydroids of the west coast of North America: Bulletin from the Laboratories of Natural History, State University of Iowa, 1911, pp. 1-91.

Some hydroids of the Vancouver island region: Transactions of the Royal Society of Canada, Ser. 3, vol. viii, Sec. iv, 1914, pp. 99-216.

Hydroids of eastern Canada: Contributions to Canadian Biology, 1918, pp. 329-336.

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